

REMARKS / DISCUSSION OF ISSUES

The present amendment is submitted in response to the Office Action mailed November 3, 2009. Claims 1-15 remain in this application. Claims 1, 11 and 15 have been amended. In view of the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Interview Summary

Applicants appreciate the courtesy granted to Applicant's attorney, Michael A. Scaturro (Reg. No. 51,356), during a telephonic interview conducted on Wednesday, January 27, 2010. During the telephonic interview, a proposed amendment to Claim 1 was submitted and discussed. The Examiner proposed certain corrections to the proposed amendment which were agreed upon by both parties to be incorporated into claim 1. The Examiner further stated that the proposed amendments, incorporating said Examiner suggested changes, appear to overcome the cited references, however, a further search will probably be required before the matter can be deemed allowable.

Rejections under 35 U.S.C. §102(b)

I. Claim 1, 2, 4, 5 and 11 are allowable

In the Office Action, Claims 1, 2, 4, 5 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,118,131 ("Korevaar"). Applicant respectfully traverses the rejections.

Independent Claim 1 has been amended herein to better define Applicant's invention over Korevaar. Claim 1 now recites limitations and/or features which are not disclosed by Korevaar. Specifically, Claim 1 has been amended herein to recite:

1. A receiver (20) for optical communications including:

at least one primary optical detector (12) for receiving radiation from a radiation beam (16a) when the radiation beam is aligned with the primary optical detector (12), and

at least one auxiliary optical detector (15a) and at least one other auxiliary

optical detector (15b) arranged to receive radiation from the radiation beam (16b)
when the radiation beam is not aligned with the primary optical detector (12),
wherein the at least one auxiliary optical detector (15a) and the at least one
other auxiliary optical detector (15b) are physically separated from each other by an
air gap, and
wherein said at least two auxiliary optical detectors (15a, 15b) are positioned
in front of a diffuser (13:71).
wherein the diffuser (13; 71) [[encircling]] encircles the at least one primary
optical detector (12) to form an assembly (12, 13:71) that is arranged such that the
diffuser (13;71) lies substantially in or close to the field of focus of a focusing element
(11;70) for generating diffuse light by diffusely redirecting radiation intended for the
at least one primary optical detector directly towards the auxiliary optical detectors
(15a, 15b) in the case where the radiation beam is not aligned with the at least one
primary optical detector.

It is respectfully submitted that Korevaar does not anticipate Claim 1 for at least the following reasons.

- Korevaar and Javitt (cited against claim 9) do not teach at least two auxiliary optical detectors **separated by an air gap**

As admitted by the Office, Korevaar does not teach or suggest at least two auxiliary optical detectors separated by an air gap. Instead, Korevaar teaches a single primary optical detector, e.g., Fig. 3, element 14, shown with an active area in Fig. 2A, element 18 for receiving radiation from a radiation beam when the radiation beam is aligned with the primary optical detector. In the Office Action, Javitt et al. is cited with regard to the rejection of claim 9 which discloses at least one pair of auxiliary detectors, e.g., Fig. 2. However, the at least one pair of auxiliary detectors described in Javitt comprise a photodetector array 80 which may be a conventional quad sensor with four, electrically isolated, photodetector segments 82a-d disposed circumferentially around a central aperture 84. The photodetector array 80 of Javitt is distinguishable from the pair of auxiliary optical detectors (15a, 15b) recited in claim 1 in that claim 1, as amended, now recites that the auxiliary optical detectors (15a, 15b) are

separated by an air gap as opposed to being disposed circumferentially around a central aperture 84, as taught in Korevaar.

Thus, the cited portions of Korevaar and Javitt, individually or in combination, do not disclose or suggest, “*wherein the at least one auxiliary optical detector (15a) and the at least one other auxiliary optical detector (15b) are physically separated from each other by an air gap*”, as recited in claim 1 (Emphasis Added).

- Korevaar does not teach that the diffuser diffusely redirects radiation intended for the at least one primary optical detector **directly** towards the auxiliary optical detectors (15a, 15b).

Instead, Korevaar teaches that light not hitting the active area of the detector 18 is **indirectly reflected from a beam splitter to a focusing lens towards a mirror** and then towards **the camera**. Korevaar describes this process at col. 4, lines 62-67 through col. 5, line 14. As light is scattered from the focal point 38 on surface 16, it travels toward **the beam splitter 28** where approximately 4% of the light is reflected through **lens 29** toward the **turning mirror 30**. In turn, the light is reflected from turning mirror 30 toward **the camera 32**. The resultant reflection received by the camera 32 is shown in FIG. 2B.

Thus, the cited portions of Korevaar do not disclose or suggest, *wherein the diffuser (13; 71) encircles the at least one primary optical detector (12) to form an assembly (12, 13:71) that is arranged such that the diffuser (13;71) lies substantially in or close to the field of focus of a focusing element (11;70) for generating diffuse light by diffusely redirecting radiation intended for the at least one primary optical detector **directly towards the auxiliary optical detectors (15a, 15b)** in the case where the radiation beam is not aligned with the at least one primary optical detector*, as recited in claim 1 (Emphasis Added).

- The cited reference, Korevaar does not teach the use of a diffuser wherein the diffuser (13; 71) encircles the at least one primary optical detector (12) to form an assembly (12, 13:71) that is arranged such that the diffuser (13;71) lies substantially in or close to the field of focus of a focusing element (11;70) for

generating diffuse light by diffusely redirecting radiation intended for the at least one primary optical detector directly towards the auxiliary optical detectors (15a, 15b) in the case where the radiation beam is not aligned with the at least one primary optical detector.

It is respectfully submitted that the system of Korevaar **does not include a diffuser**. In the Office Action, Korevaar is cited by the Examiner at col. 4, lines 62-67 for allegedly disclosing a diffuser. However, Korevaar merely recites that light is reflected from the surface 16 and is scattered back towards the CCD camera. Referring to FIG. 1 of Korevaar a laser beam receiver 10 includes a base 12 on which is mounted a detector 14. For purposes of the present invention the detector 14 preferably includes an avalanche photo diode (APD) of a type well known in the pertinent art. A surface 16 of the detector 14 is formed with an aperture which exposes the active area 18 of the APD. As best seen in FIG. 2A, the aperture for the active area 18 is substantially circular and has a diameter 20 which is approximately one hundred and fifty microns (150 .mu.m).

The surface 16 of Korevaar is not equivalent to a diffuser. As discussed in the previous response, It is well known in the optical arts that a **diffuser** is an **optical element** that generates diffuse light. Diffuse light can be generated by diffuse reflection and/or diffuse transmission. The "Fiber Optics Standard Dictionary", Martin H. Weik, Kluwer Academic Publ; edition: 0003 (August 1997, ISBN-10: 0-412-12241-3, page 222. The surface 16 of Korevaar does not generate diffuse light, it merely reflects light back towards the CCD camera.

Hence, claim 1 is allowable. Claims 2, 4 and 5 depend from independent Claim 1 and therefore contains the limitations of Claim 1 and is believed to be in condition for allowance for at least the same reasons given for Claim 1 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claims 2, 4 and 5 is respectfully requested.

Independent Claim 11 recites similar subject matter as Independent Claim 1 and therefore contains the limitations of Claim 1. Hence, for at least the same reasons given for

Claims 1, Claim 11 is believed to recite statutory subject matter under 35 USC 102(b).

Claims 6, 7, 9 and 10 are allowable

In the Office Action, Claims 6, 7, 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Korevaar and U.S. Patent No. 6,154,297 (“Javitt”). Applicant respectfully traverses the rejections.

As explained above, the cited portions of Korevaar do not disclose or suggest each and every element of claims 1 from which claims 6, 7, 9 and 10 depend. Javitt does not disclose each of the elements of claim 1 that are not disclosed by Korevaar. For example, Javitt does not disclose or suggest “*wherein the at least one auxiliary optical detector (15a) and the at least one other auxiliary optical detector (15b) are physically separated from each other by an air gap, and wherein said at least two auxiliary optical detectors (15a, 15b) are positioned in front of a diffuser (13:71)*”, as recited in claim 1.). Hence claim 1 is allowable. Claims 6, 7, 9 and 10 depend from independent Claim 1 and therefore contains the limitations of Claim 1 and are believed to be in condition for allowance for at least the same reasons given for Claim 1 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 6, 7, 9 and 10 is respectfully requested.

Claims 12-14 are allowable

In the Office Action, Claims 12-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Korevaar and U.S. Patent Application No. 2002/0131121 (“Jeganathan”). Applicant respectfully traverses the rejections.

As explained above, the cited portions of Korevaar do not disclose or suggest each and every element of claims 1 from which claims 12-14 depend. Jeganathan does not disclose each of the elements of claim 1 that are not disclosed by Korevaar. For example, Jeganathan does not disclose or suggest “*wherein the at least one auxiliary optical detector (15a) and the at least one other auxiliary optical detector (15b) are physically separated from each other by an air gap, and wherein said at least two auxiliary optical detectors (15a, 15b) are positioned in front of a diffuser (13:71)*”, as recited in claim 1.). Hence claim 1 is allowable. Claims

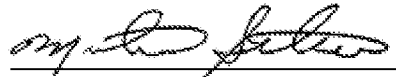
12-14 depend from independent Claim 1 and therefore contains the limitations of Claim 1 and are believed to be in condition for allowance for at least the same reasons given for Claim 1 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 12-14 is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-15 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-945-6000.

Respectfully submitted,



Michael A. Scaturro
Reg. No. 51,356
Attorney for Applicant

Mailing Address:
Intellectual Property Counsel
Philips Electronics North America Corp.
P.O. Box 3001
345 Scarborough Road
Briarcliff Manor, New York 10510-8001